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ABSTRACT

The document contains technical papers on the Pilot Models for Mainstreaming Students with Behavior Disorders project which served 124 secondary students. The first paper presents the results of a factor analysis of the Student Referral Form used in the project which revealed six basic factors (socialization, anxiety, authority, activity level, negative acting out, and reaction to school); while additional analysis data of the identified factors of the referral form are reported in a second paper. Subsequent papers address the following project components: comparisons of referred and nonreferred students on the Student Referral Form, consistency of teacher rating of secondary students' behavior, development of a screening system for identifying mild to moderate behavioral problems in secondary students, procedures for diagnostic testing, design of a parent involvement system, prescriptive instruction as the basic instructional strategy, and project exit procedures. Also provided are an abstract of student based results, 1974-75; an abstract of student based results, 1975-76; and validation data. It is concluded that students with behavioral problems can be helped through a resource room, mainstreaming based program; that improvement in socialization should help the student by creating a better learning environment; and that improvement in relation to authority and negative acting out should have the same effect as above and, in addition, improvement in these two areas should have direct effect on the student's relations with teachers. (SBH)

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TECHNICAL PAPERS

Recognize, Respond, and Reinforce: Pilot Models for Mainstreaming Secondary Students Who Are Mild to Moderate Behaviorally Disordered

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Factor Structure of the Student Referral Form

Pilot Models For Mainstreaming
Students With Behavior Disorders
Project

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Factor Structure Of The
Student Referral Form

The purpose of this paper is to present the results of a factor analysis of the student referral form used in the project entitled Pilot Models For Mainstreaming Students With Behavior Disorders. Open-ended items presented at the end of the referral forms were not included in this analysis.

The student referral form was composed of 32 behavioral descriptions statements followed by space for a check mark under one of five descriptions, the descriptions being Never Observed, Seldom Observed, Occasionally Observed, Often Observed, and A Severe Problem. Following the 32 behavioral descriptions were three open-ended questions. The referral form was completed by either a teacher or a counselor or multiples of either if they knew the student. A copy of the student referral form is presented in the Appendix of this report.

The analysis data was derived from 124 secondary students referred to the project. All students were enrolled in secondary (7-12) grades. The referral data on each student was derived from the teacher that specifically referred the student so only one rating per student was included in the analysis.

For purposes of analysis, ratings in the Never Observed and Seldom Observed categories were combined into one classification. The combined classification of Never and Seldom were assigned a value of four, the category Occasionally Observed was assigned a value of three, Often Observed was assigned a value of two, and A Severe Problem was assigned a value of one. The number assigned reflected was a system whereby the higher the score the less frequently the behavior was observed.

The statistical analysis of the data was a principle component analysis with squared multiple correlation coefficients for estimates of communality inserted into the principle diagonal. The number of significant components was estimated from eigenvalues of one or greater. The principle factor axes were rotated after identification using orthogonal rotation to the verimax criterion. Item composition of identified factors was defined by a factor loading of .35 or greater.

RESULTS

The descriptive statistics for the 32 items are presented in Table 1. It will be noted that the highest mean value was associated with Item 32 ($\overline{X}$ = 3.77, s = .68) which was "Repeated Somatic Complaints". The high mean value for this item indicated that this problem was seldom observed. Other items with high mean values were Item 18 ("Destructive") and Item 19 (Bizarre Thinking or Behavior"). Items with low mean values (more frequently observed behavior) were Item 6 - "Need for Supervision" ($\overline{X}$ = 2.10, s = 1.14), Item 5 - "Distractible ($\overline{X}$ = 2.40, s = 1.15) and Item 7 - "Seeks Attention From Others" ($\overline{X}$ = 2.51, s = 1.25).

The item correlation matrix is presented in Table 2. For comparison purposes it is noted that with N=124 the .05 level of significance for r was .18 and the .01 level of significance was .23.

The initial factor analysis of the 32 items yielded nine factors with eigenvalues of one or greater. After the verimax rotation there were six factors with eigenvalues of one or greater. Eigenvalues for the rotated factors ranged from a high of 6.61 to a low of 1.09. The percent of variance accounted for in rotated factors ranged from 36.6% to 6.0% with

Table 1
Item Characteristics

Item	Item Content	$\bar{X}$	s
1	Tense	3.34	.92
2	Overly Active	3.00	1.09
3	Overly Sensitive	3.15	1.02
4	Quiet or Withdrawn	3.21	1.02
5	Distractible	2.40	1.15
6	Need for Supervision	2.10	1.14
7	Seeks Attention From Others	2.51	1.25
8	Resents Demands Placed Upon Them	2.60	1.20
9	Difficulty Making Friends	3.10	1.12
10	Tends to be a "Loner"	3.23	1.05
11	Bullies Other Students	3.47	.88
12	Shunned or Rejected by Others	3.18	1.08
13	Dislike for School	2.77	1.14
14	Conflict with Teacher	3.10	1.07
15	Bored, Easily Frustrated	2.61	1.14
16	Uncooperative	2.65	1.13
17	Excessive Anger	3.28	1.02
18	Destructive	3.59	.76
19	Bizarre Thinking or Behavior	3.59	.87
20	Fights Frequently	3.58	.73
21	Obscene or Profane	3.31	.98
22	Lies	3.32	.92
23	Sullen	3.36	.89
24	Apparent Lack of Motivation	2.47	1.17
25	Easily Depressed	3.33	1.00
26	Poor Self-Image	3.08	1.12
27	Fearful	3.61	.84
28	Anxious	3.49	.78
29	Disruptive	2.84	1.15
30	Frequent Absences	3.34	1.03
31	Marked Drop in Achievement	3.27	1.01
32	Repeated Somatic Complaints	3.77	.68

Table 2
Item Correlation Matrix

Variable[1]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1.00	.03	.43	.27	.01	-.09	-.07	-.03	.11	.08	-.01	.10	-.01	.00	.14	-.14
2		1.00	.07	-.49	.31	.29	.51	.37	-.13	-.40	.24	-.11	.07	.28	.10	.38
3			1.00	.20	.05	-.03	.01	.19	.31	.10	.02	.24	.10	.10	.06	.02
4				1.00	-.11	-.16	-.43	-.29	.41	.54	-.14	.30	-.16	-.29	-.02	-.35
5					1.00	.51	.44	.30	.01	-.06	.28	.07	.29	.32	.42	.24
6						1.00	.53	.20	.03	-.08	.26	.12	.27	.27	.28	.22
7							1.00	.48	-.12	-.21	.45	-.04	.35	.44	.29	.38
8								1.00	-.10	-.28	.34	-.06	.54	.58	.27	.67
9									1.00	.62	.11	.75	-.03	-.12	-.11	-.14
10										1.00	-.12	.51	-.04	-.25	-.11	-.27
11											1.00	.12	.20	.20	.16	.23
12												1.00	.05	-.11	-.00	-.09
13													1.00	.58	.39	.48
14														1.00	.30	.59
15															1.00	.28
16																1.00

(Cont.)

Table 2 (Cont.)
Item Correlation Matrix

Variable (Cont.)	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
17	1.00	.36	.20	.33	.48	.24	.31	-.00	.28	.09	-.03	.26	.39	.01	.01	.16
18		1.00	.15	.41	.44	.46	.22	.19	.16	.21	.14	.14	.40	.09	.06	.28
19			1.00	.21	.40	.23	.24	.18	.19	.08	-.04	.23	.27	-.06	.06	.08
20				1.00	.23	.36	.14	.17	.12	.05	-.04	.18	.42	.02	.10	.04
21					1.00	.47	.21	.17	.12	.15	.01	.16	.37	-.01	.16	.25
22						1.00	.23	.24	.09	.08	.02	.03	.35	.28	.12	.17
23							1.00	.16	.42	.08	.06	.36	.22	.10	.18	.28
24								1.00	.14	.34	-.09	-.01	.23	.12	.16	-.06
25									1.00	.30	.30	.37	.07	.13	.18	.33
26										1.00	.35	.26	.02	-.02	-.03	.15
27											1.00	.34	-.18	.04	.05	.23
28												1.00	.07	-.04	.11	.13
29													1.00	-.09	-.01	-.04
30														1.00	.35	.25
31															1.00	.20
32																1.00

[1]See Table 1 for variable identification.

accumulated percent of variance accounted for through the six factors being 88.4%. The complete list of rotated factors, eigenvalues and percent of variance accounted for is summarized in Table 3.

Table 3
Eigenvalues and Variance Accounted For

	Initial Analysis			Rotated		
Factor	Eigenvalue	% Var.	Cum. % Var.	Eigenvalue	% Var.	Cum. % Var.
1	7.01	21.9	21.9	6.61	36.6	36.6
2	4.36	13.6	35.5	3.96	21.9	58.5
3	2.00	6.3	41.8	1.58	8.8	67.3
4	1.89	5.9	47.7	1.50	8.3	75.6
5	1.70	5.3	53.0	1.24	6.8	82.4
6	1.53	4.8	57.8	1.09	6.0	88.4
7	1.22	3.8	61.6			
8	1.17	3.6	65.3			
9	1.02	3.2	68.4			

The final communality of each item is presented in Table 4. It will be noted the lowest communality value was .26 (Item 19) which indicates all items had adequate communality for factor purposes.

The orthogonally rotated factor matrix for the 32 items is presented in Table 5. Factor loadings of .35 or greater are underlined in Table 5.

Of the 32 items, seven did not load at, or beyond, the .35 level in any of the first six factors. The items that did not load into the final six factors were Items 11, 19, 20, 23, 30, 31, and 32. It was noted that

Table 4
Item Communality Values

Item[1]	Communality	Item[1]	Communality
1	.57	17	.68
2	.58	18	.55
3	.49	19	.26
4	.61	20	.71
5	.57	21	.61
6	.55	22	.49
7	.68	23	.39
8	.72	24	.69
9	.92	25	.48
10	.67	26	.55
11	.54	27	.51
12	.62	28	.55
13	.69	29	.69
14	.56	30	.41
15	.36	31	.33
16	.63	32	.41

[1]See Table 1 for variable identification.

Table 5
Varimax Rotated Factor Matrix

Item[1]	1	2	3	4	5	6
1	-.01	.74	-.05	.01	-.11	-.04
2	-.18	.00	.38	.54	.09	-.24
3	.24	.58	.26	-.01	-.06	-.07
4	.39	.30	-.35	-.33	-.24	.14
5	.03	.02	.15	.61	-.14	.21
6	.04	-.05	.01	.67	.12	.22
7	-.10	-.01	.28	.67	.29	.14
8	-.07	.03	.77	.22	.06	.19
9	.94	.13	.01	-.04	.02	-.10
10	.68	.04	-.29	-.15	.01	.10
11	.07	-.02	.20	.28	.14	.00
12	.76	.15	-.04	.08	.06	.03
13	.03	.07	.49	.17	.19	.56
14	-.17	.07	.58	.23	.16	.30
15	-.09	.08	.19	.27	-.04	.43
16	-.14	-.14	.68	.19	.15	.20
17	.06	.10	.67	-.04	.23	-.12
18	.06	.10	.19	.16	.59	.09
19	.04	.01	.17	.29	.19	.10
20	.04	-.01	.11	.22	.17	.07
21	.12	-.12	.34	.15	.61	.01
22	-.04	-.04	.19	.19	.50	.18
23	.19	.16	.02	.17	.08	.08
24	.11	-.13	.13	.17	.06	.76
25	.31	.37	.21	.09	.03	.16
26	.45	.25	-.05	-.11	.27	.40
27	.21	.62	-.20	-.10	.17	.07
28	.06	.45	.04	.07	.07	.05
29	-.07	-.09	.49	.53	.25	.10
30	.03	.05	.04	-.11	.09	.08
31	-.00	-.05	-.01	.06	-.01	.10
32	.15	.32	.04	-.02	.31	-.11

[1]See Table 1 for variable identification.

Items 30, 31, and 32 did load into Factor 7 (Eigenvalue = .78) and items 31 and 40 loaded into Factor 8 (Eigenvalue = .69) and Item 43 was Factor 9 (Eigenvalue = .62). All seven items that did not load into the first six factors did have adequate communality values so this was not a factor.

Factor 1:

As noted earlier, Factor 1 accounted for 36.6% of the total variance. There were five items that had a loading of .35 or greater in this factor. The items and item characteristics for this factor are summarized in Table 5.

Table 5
Item Composition of Factor 1

Item	Item Content	Load	$\bar{X}$	s
4	Quiet or Withdrawn	.39	3.21	1.02
9	Difficulty Making Friends	.94	3.10	1.12
10	Tends To Be A "Loner"	.68	3.23	1.05
12	Shunned or Rejected by Others	.76	3.18	1.08
26	Poor Self Image	.45	3.08	1.12

The construct reflected in Factor 1 appears to be basically a socialization or friendliness factor. It will be noted that the three items with the highest factor loadings all dealt with relations with others.

From an operational point of view, it appears that two of the items listed in Factor 1 could be deleted without adversely affecting the assessment of the basic construct. Items 4 and 26 should be reviewed for possible deletion while Items 9, 10, and 12 should be considered for possible continued use.

Factor 2:

Factor 2 accounted for 21.9% of the variance and was composed of five items. The items and item characteristics are presented in Table 6.

Table 6
Item Composition of Factor 2

Item	Item Content	Load	$\bar{X}$	s
1	Tense	.74	3.34	.92
3	Overly Sensitive	.58	3.15	1.02
25	Easily Depressed	.37	3.33	1.00
27	Fearful	.62	3.61	.84
28	Anxious	.45	3.49	.78

As reflected in Table 6, Factor 2 appears to focus on the students degree of anxiety although the behavioral descriptor "Anxious" was not highly loaded in the factor. Itwas possible that the descriptor "Anxious" was not highly loaded in the factor because respondents redefined the term to conform with more common definitions of the word.

While five items factored into Factor 2, it appears three may suffice for future use. Items 1, 3, and 27 may be adequate for future use and Items 25 and 28 may be dispensible.

Factor 3:

Factor 3 accounted for less variance than Factors 1 and 2 but was composed of more items. A total of eight items had a factor loading of .35 or greater in this factor. Four of the eight items also had loadings of .35 or greater in other factors with three of the four having higher loadings in other factors. The items that had loadings of .35 or greater in Factor 3 are presented in Table 7.

Table 7
Item Composition of Factor 3

Item	Item Content	Load	$\bar{X}$	s
2	Overly Active	.38	3.00	1.09
4	Quiet or Withdrawn	-.35	3.21	1.02
8	Resents Demands Placed Upon Him	.77	2.60	1.20
13	Dislike for School	.49	2.77	1.14
14	Conflict With Teacher	.58	3.10	1.07
16	Uncooperative	.68	2.65	1.13
17	Excessive Anger	.67	3.28	1.02
29	Disruptive	.49	2.84	1.15

The basic construct associated with Factor 3 appears to be an authority figure relation. Students that would be rated low on this factor would be students that would be in conflict with authority figures and this conflict would manifest through resentment, lack of cooperation, anger, and conflict. Conversely, students rated high on this factor would be individuals that tend to get along with authority figures.

While eight items loaded into this factor it appears that four items may be adequate for assessing the factor. Items 8, 14, 16, and 17 would probably be sufficient for assessment with items 2, 4, 13 and 29 deleted from this factor.

Factor 4:

Factor 4 has five items with a factor loading of .35 or greater. All five items had factor loadings substantially above the .35 criteria. The five items that loaded in this factor are presented in Table 8.

Table 8
Item Composition of Factor 4

Item	Item Content	Load	$\bar{X}$	s
2	Overly Active	.54	3.00	1.09
5	Distractible	.61	2.40	1.15
6	Need for Supervision	.67	2.10	1.14
7	Seeks Attention From Others	.67	2.51	1.25
29	Disruptive	.53	2.84	1.15

Factor 4 appeared to be a factor that assessed a student's activity level in class. Students that score low on this factor would be students that are very active in class in nonproductive ways, basically the class "show-off". A low score would not necessarily indicate any conflict with authority, destructive behavior, or serious negative consequences from behavior, just a student always acting up to attract attention to self. A high score on this factor would indicate the student was well behaved in class, attended to what was going on in class, and was rarely a disruptive influence. A low score would not indicate a withdrawn student or a student that had problems with peer relations, just a student that was nondisruptive.

It is doubtful if all five items need to be retained in this factor. Of the five items, Items 5, 6, and 7 would probably be adequate for assessing this factor and Items 2 and 29 probably could be discontinued without serious loss.

Factor 5:

Factor 5 had three items with factor loadings of .35 or greater and all three items had loading substantially above the criteria. The three items that constitute Factor 5 are presented in Table 9.

Table 9
Item Composition of Factor 5

Item	Item Content	Load	$\bar{X}$	s
18	Destructive	.59	3.59	.75
21	Obscene or Profane	.61	3.31	.98
22	Lies	.50	3.32	.92

The basic construct involved with Factor 5 seemed to be very negative acting out behavior. Students that were assigned low scores on this factor would be serious problems in the classroom (and other possible places) and would probably be the traditional serious problem child. Of the factors identified among the behavioral descriptors, this factor probably reflects a more serious construct than others from a social point of view.

The three items associated with this factor should probably be retained. It is doubtful if any advantage exists by dropping any of the given items from this factor.

Factor 6:

Four items comprise Factor 6 of which two had loading well above the criterian of .35. The four items in the factor are presented in Table 10.

Table 10
Item Composition of Factor 6

Item	Item Content	Load	$\bar{X}$	s
13	Dislike For School	.56	2.77	1.14
15	Bored, Easily Frustrated	.43	2.61	1.14
24	Apparent Lack of Motivation	.76	2.47	1.17
26	Poor Self-Image	.40	3.08	.12

The basic construct included in Factor 6 appearedto be reaction to school. Students that are rated high on this factor would probably be students that enjoy school and school work, are motivated to do school work and are willing to work on school assignments and activities. Conversely, students that score low on this factor would probably be students that are "turned off" with school and really don't care for school. Continued school attendance by students low on this factor would probably be based on variables other than enjoyment of school and school work.

Of the four items that loaded into this factor, it is probable that one could be discontinued and three retained. Item 26 could probably be dropped with Items 13, 15, and 24 continued.

Other

Seven items did not factor into any of the six listed factors. Three of the seven items actually factored in Factor 7, but Factor 7 had an eigenvalue below 1.00. The three items that constituted Factor 7 were Items 30 (Frequent Absences), 31 (Marked Drop In Achievement) and 32 (Repeated Somatic Complaints). It is suggested that at least one of the three, probably 30 or 31, be continued because the basic construct reflected in this factor was indicative of traditionally defined neurotic reaction. Items 11 (Bullies Other Students) and 20 (Fights Frequently) comprised a start of Factor 8 and for the purpose of the project one of the two items, probably Item 20, should be continued. Item 39 (Bizarre Thinking or Behavior) was a unique item and probably should be continued in the Student Referral Form.

Summary

A factor analysis of the 32 behavior descriptors of the Student Referral Form were reported in this study. The basic study data was teacher ratings of 124 secondary students that had been referred to the project as possible behavioral disordered students. The results of the factor analysis indicated there were six basic factors covered in the form, the factors were:

Factor 1 - Socialization

Factor 2 - Anxiety

Factor 3 - Authority

Factor 4 - Activity Level

Factor 5 - Negative Acting Out

Factor 6 - Reaction To School

A description of each factor was presented and suggestions were made for item continuation or item deletion. It was suggested that 19 items would probably assess the six factors instead of the present 25 items listed. It was also suggested that an additional three items be continued on the referral form even though they did not factor in.

APPENDIX

REFERRAL: TITLE III PROJECT

Pupil's Name _____ Birthdate _____

School _____ Grade _____ Referral Date _____

Teacher Making Referral _____

The following list of characteristics may be utilized by the teacher in identifying students who may be experiencing adaptive problems in their classroom. The teacher is asked to rate only those characteristics that seemingly apply to that student by placing a check in the appropriate box.

Characteristics	Never Observed	Seldon Observed	Ocassionally Observed	Often Observed	A Severe Problem
Tense					
Overly Active					
Overly Sensitive					
Quiet or Withdrawn					
Distractible					
Need for Supervision					
Seeks Attention from Others					
Resents Demands Placed Upon Them					
Difficulty Making Friends					
Tends to be a "Loner"					
Bullies other Students					
Shunned or Rejected by Others					
Dislike for School					
Conflict with Teacher					
Bored, Easily Frustrated					
Uncooperative					
Excessive Anger					
Destructive					
Bizarre Thinking or Behavior					
Fights Frequently					

Characteristics	Never Observed	Seldom Observed	Occasionally Observed	Often Observed	A Severe Problem
Obscene or Profane					
Lies					
Sullen					
Apparent Lack of Motivation					
Easily Depressed					
Poor Self-Image					
Fearful					
Anxious					
Disruptive					
Frequent Absences					
Marked Drop in Achievement					
Repeated Somatic Complaints					

Describe problem and reason for referral:

What are the students strengths, interests, and personality assets?

In your estimation, what can be done to assist the student in functioning more effectively?

Student Referral Form

Analysis by Factor

Pilot Models For

Mainstreaming Students

With Behavioral Disorders

Prepared By

Selction Research, Inc.

Lincoln, Nebraska

Student Referral Form
Analysis by Factor

An earlier report presented the results of a factor analysis of the Student Referral Form. This report presents additional analysis data of the identified factors of the Form. Specifically, the factor reliability estimates and factor intercorrelation matrix are presented in this report.

The data presented in this report was derived from ratings of 129 students. All 129 students had been referred to the project for evaluation purposes so this sample does not represent a randomly selected student group.

Results

Scores By Factor

Student scores for each of the six identified factors were derived. The results for each of the factors are presented in Table 1.

Table 1
Results by Factor
(N = 129)

Factor	k	$\bar{X}$	s^2	s	$\bar{X}k$
I. Socialization	3	9.40	8.29	2.88	3.13
II. Anxiety	3	10.10	4.62	2.15	3.37
III. Authority	4	12.01	10.51	3.24	3.00
IV. Activity Level	3	6.97	8.11	2.85	2.32
V. Negative Acting Out	3	10.25	4.42	2.10	3.42
VI. Reaction To School	3	7.88	7.45	2.73	2.63

As reflected in Table 1 students were differentially rated across the six factors. On a mean per item basis students were rated lowest on IV ($\bar{X}k$ = 2.32) followed by VI ($\bar{X}k$ = 2.63). Students were rated highest on V ($\bar{X}k$ = 3.42) and II ($\bar{X}k$ = 3.37). For reference purposes the maximum rating per item was 4 and the minimum rating per item was 1.

Factor Intercorrelation

The obtained results for each student on each factor were intercorrelated, the results of that intercorrelation are reported in Table 2.

Table 2
Factor Intercorrelation Matrix
(N = 129)

Factor	I	II	III	IV	V	VI
I	1.00	.28*	-.17	-.03	.03	-.01
II		1.00	.01	-.03	.00	.03
III			1.00	.48*	.60*	.54*
IV				1.00	.40*	.46*
V					1.00	.36*
VI						1.00

* $p < .05$

For this sample the factors were not independent. Factor I correlated with Factor II and Factors III, IV, V, and VI were intercorrelated. While the Factors did intercorrelate, the Factors still appear to be measuring separate constructs so the six factors appear to be usable.

Factor Reliability

Factor reliability was estimated using the Kuder-Richardson Formula 20 procedure and through the interitem correlation matrix procedure. The

reliability estimate for each factor using each procedure is summarized in Table 3.

Table 3
Factor Reliability Estimates

Factor		r Values K-R	r Values Item
I	Socialization	.85	.84
II	Anxiety	.65	.66
III	Authority	.77	.70
IV	Activity Level	.74	.74
V	Negative Acting Out	.70	.70
VI	Reaction To School	.71	.71

The reliability estimated for Factor II is lower than desired but still meets minimal acceptable criteria for a screening instrument. The reliability estimates for each of the other five factors are adequate.

Using the lowest reported reliability estimates the standard error of measurement for each factor was derived. The estimated standard error of measurement for each factor, reported in raw score units, are presented in Table 4.

SUMMARY

This report presented additional analysis data on each of the six factors previously identified through a factor analysis of the Student Referral Form. The additional analysis presented descriptive results for each factor, factor intercorrelation results and factor reliability estimates. The results of the analysis indicate that the factor scores appear to be

Table 4
Standard Error of Measurements Estimates

Factor		SE_m
I	Socialization	1.15
II	Anxiety	1.27
III	Authority	1.78
IV	Activity Level	1.45
V	Negative Acting Out	1.15
VI	Reaction To School	1.47

usable entities when applied to a sample of students referred to the project.

A Comparison of Referred and Nonreferred Students on the Student Referral Form

Pilot Models For
Mainstreaming Students
With Behavioral Disorders

Prepared by
Selection Research, Inc.
Lincoln, Nebraska

A Comparison of Referred and Nonreferred Students on the Student Referral Form

A total of 129 students have been referred to the project with the Student Referral Form completed on each of the students. For comparison purposes a sample of 50 students were rated but were not considered for referral. The 50 additional students were, so far as was known, a sample of 50 typical students.

The Student Rating Scale was computed for each student, project referred and nonreferred. The ratings were assigned to each student by the teacher making the referral or the child's teacher that probably knew him best. The ratings were made across 32 items with the most positive rating on an item assigned a value of 4 and the most negative rating on an item assigned a value of one.

In addition to item comparisons the two samples were compared on each of six factor scores. Items that comprised each factor were summed and the summed scores were compared.

All comparisons, item and factor, were made using the analysis of variance technique. For the purpose of these comparisons the .05 level of significance was used.

Results

Item Results

The comparative results for each of the 32 items are summarized in Table 1.

It was apparent from Table 1 that the two samples were statistically significantly different on all items except Item 32 (Repeated Somatic Complaints). The largest sample differences were associated with Items 15 (Uncooperative), 16 (Excessive Anger), 8 (Resents Demands Placed Upon Them), and 24 (Apparent Lack of Motivation).

Table 1
Mean Comparison By Item

Item	Nonreferral (N = 50) $\bar{X}$	s	Referral (N = 124) $\bar{X}$	s	$\bar{X}$ Diff	F[1]
1. Tense	3.86	.41	3.34	.92	.52	27.04*
2. Overly Active	3.76	.72	3.00	1.09	.76	29.05*
3. Overly Sensitive	3.82	.52	3.15	1.02	.67	34.54*
4. Quiet or Withdrawn	3.72	.57	3.21	1.02	.51	17.47*
5. Distractible	3.38	.88	2.40	1.15	.98	37.05*
6. Need for Supervision	3.32	.89	2.10	1.14	1.22	57.43*
7. Seek Attention from Others	3.56	.86	2.51	1.25	1.05	39.53*
8. Resents Demands Placed Upon Them	3.86	.50	2.60	1.20	1.26	93.94*
9. Difficulty Making Friends	3.76	.72	3.10	1.12	.66	21.91*
10. Tends to be a "Loner"	3.76	.69	3.23	1.05	.53	14.75*
11. Bullies other students	3.84	.58	3.47	.88	.37	10.54*
12. Shunned or Rejected by others	[illegible]0	.46	3.18	1.08	.72	39.89*
13. Dislike for School	3.98	.14	2.77	1.14	1.21	146.41*
14. Conflict with Teacher	4.00	.00	3.10	1.07	.90	89.76*
15. Bored, Easily Frustrated	4.00	.00	2.61	1.14	1.39	193.21*
16. Uncooperative	3.92	.44	2.65	1.13	1.27	115.84*
17. Excessive Anger	3.96	.20	3.28	1.02	.68	51.24*
18. Destructive	4.00	.00	3.59	.76	.41	33.35*
19. Bizarre Thinking or Behavior	4.00	.00	3.59	.87	.41	28.36*
20. Fights Frequently	3.92	.34	3.58	.73	.34	19.50*
21. Obscene or Profane	3.98	.34	3.58	.73	.34	19.50*
22. Lies	3.92	.34	3.32	.92	.60	39.89*
23. Sullen	3.90	.46	3.36	.89	.54	29.16*
24. Apparent Lack of Motivation	3.72	.61	2.47	1.17	1.25	87.01*
25. Easily Depressed	3.88	.39	3.33	1.00	.55	27.44*
26. Poor Self-Image	3.74	.57	3.08	1.12	.66	25.78*
27. Fearful	4.00	.00	3.61	.84	.39	25.65*
28. Anxious	3.98	.14	3.49	.78	.49	47.62*
29. Disruptive	3.90	.42	2.84	1.15	1.06	75.50*
30. Frequent Absences	3.80	.57	3.34	1.03	.46	13.33*
31. Marked Drop in Achievement	3.86	.45	3.27	1.01	.59	28.77*
32. Repeated Somatic Complaints	3.84	.65	3.77	.68	.07	.40

[1] df = 1,173
* $P \leq .05$

Factor Analysis

The comparative results for each of the 6 factors are summarized in Table 2.

Table 2
Mean Comparison By Factor

Factor	Nonreferral (N = 50) $\bar{X}$	s	Referral (N = 129) $\bar{X}$	s	Diff	F^2
I Socialization	11.42	1.70	9.40	2.88	2.02	33.50*
II Anxiety	11.68	.79	10.10	2.15	1.58	52.06*
III Authority	15.74	.94	12.01	3.24	3.73	140.21*
IV Activity Level	10.26	2.36	6.97	2.85	3.29	62.25*
V Negative Acting Out	11.90	.42	10.25	2.10	1.65	71.61*
VI Reaction To School	11.70	.65	7.88	2.73	3.82	220.94*

1 Five additional cases were available at the time of this analysis.
2 df = 1,178
* p .05

As reflected in Table 2, the differences between samples was statistically significant across all six factors. The greatest sample differences were associated with Factors VI - Reaction To School and Factor III Relation To Authority.

Summary

Ratings on the Student Referral Form of students referred to the project were tested against ratings of students that had not been referred to the project. Statistically significant mean differences were identified between the two samples on 31 of 32 items of the Form and across all six factors included in the form. The reported results indicate that referred students are rated by teachers much lower than teachers rate students not referred to the project.

Consistency of Teacher Rating of Behavior of Secondary Students

Pilot Models For
Mainstreaming Students
With Behavioral Disorders

Prepared By
Selection Research, Inc.
Lincoln, Nebraska

Consistency of Teacher Rating of Behavior of Secondary Students

G. M. Hoeltke
Selection Research, Inc.

A relatively common way of assessing student behavior is to have teachers and/or counselors rate the behavior of the student. This type of assessment has a number of advantages, but the reliability of the rating is a problem. When one teacher or counselor rates the students' behavior, how reliable is that rating?

To provide a tentative answer to the question, two raters rated students' behavior concurrently. The ratings were concurrent, but the ratings were independent in that neither rater was aware of the ratings assigned by the second rater.

Method

Subjects

All students rated in this study were enrolled in grades 7 through 12. A total of 144 students were rated; 76 (53%) were in grades seven through nine, and 68 (47%) in grades ten through twelve.

Students were randomly selected from a total school enrollment of 656 students. All subjects were enrolled in the same public school.

Rating Instrument

All students were rated on the STudent Referral Form (SRF). The SRF was developed for use with secondary students, and the behavioral areas covered on the instrument were factor analytically derived. Six behavior areas are covered; the areas are Socialization, Anxiety, Relation With Authority Figures, Activity Level, Acting Out and Reaction To School. Reliability and validity data on the instrument were derived and are reported elsewhere (Hoeltke, 1975 a and b).

Raters

Two teachers that had the student enrolled in class for a minimum of one semester rated each student. The two teachers that rated the student did so independently in that neither teacher knew how the other teacher rated the student. Both teachers rating a given student did so during the same week. Instructions to raters were restricted to the directions provided on the SRF form.

Results

The ratings assigned each student by each teacher in each behavioral area were summated, and the difference between the two ratings was summarized. The average discrepancy between the two raters for each behavioral area is summarized in Table 1.

Table 1
Average Discrepancy Between Teacher Ratings

Behavioral Area		Possible Score Deviation	Jun High School Discrepancy $\bar{X}$	Jun High School Discrepancy s	Sen High School Discrepancy $\bar{X}$	Sen High School Discrepancy s	Total Secondary Discrepancy $\bar{X}$	Total Secondary Discrepancy s
I -	Socialization	9	.71	1.01	1.35	1.55	1.01	1.34
II -	Anxiety	9	.71	1.26	1.87	1.90	1.26	1.70
III -	Authority Figures	12	.72	1.35	1.22	1.69	.96	1.54
IV -	Activity Level	9	.96	1.25	1.43	1.78	1.18	1.54
V -	Negative Acting Out	9	.37	.95	.16	.41	.27	.81
VI -	Reaction to School	9	.76	1.10	1.32	1.67	1.03	1.42

As reflected in Table 1, the discrepancy between the two raters was greater for the Senior High School raters than for Junior High School raters in all behavioral areas except Area V - Negative Acting Out. The greatest difference between raters was associated with the Anxiety Area; for JHS the average deviation was .71, but for SHS the average deviation was 1.87.

The difference in ratings given by two raters varied by behavioral area. The ratings assigned by two raters were very similar for the Negative Acting Out area ($\bar{X}$ discrepancy = .27) but were, on the average, 1.26 points different for the Anxiety Area.

As reported above, there were rating differences, but the differences were less than the expected when expected was defined from standard error of measurement values. The standard error of each area was originally estimated from the reliability of the area (Hoeltke, 1975 a). A comparison of actual discrepancy values with standard error values is given in Table 2.

Table 2
Average Obtained Discrepancy
Compared to Standard Error of Measurement Values

Area		Discrepancy Obtained	Reported SE_m
I -	Socialization	1.01	1.15
II -	Anxiety	1.26	1.27
III -	Authority Figures	.96	1.78
IV -	Activity Level	1.18	1.45
V -	Negative Acting Out	.27	1.15
VI -	Reaction To School	1.03	1.47

The average obtained discrepancy scores were less than the reported standard error values. The greatest difference between actual difference in ratings and standard error value was associated with the Negative Acting Out Area, and the least difference was with the Anxiety area.

Discussion

It is difficult to generalize the reported results because only one instrument was used to rate student behavior, and all students and raters were from the same school. Also, each student was rated by only two teachers when, in fact, each student had several teachers and the ratings for a given student may have been different if other teachers had completed the SRF.

However, the results are encouraging in terms of consistency of teacher behavioral ratings of students. The fact that actual discrepancy values stayed within the standard error of measurement values is most positive, particularly when the SE_m values were independently derived and were based on internal reliability estimates (Kuder-Richardson, Formula 20).

Overall, the results of this study indicate that teacher ratings of student behavior are quite consistent, particularly when viewed in relation to the standard error of measurement. It is important to consider the standard error of measurement when interpreting the results of teacher ratings of student behavior and, to a lesser extent, it is important to consider the grade level of the teacher and the behavioral area being rated.

References

Hoeltke, G.M., Student Referral Form - Analysis By Factor. Unpublished Manuscript. Educational Service Unit #10, Kearney, Nebraska, 1975 a.

Hoeltke, G.M., A Comparison of Referred and Nonreferred Students on the Student Referral Form. Unpublished Manuscript. Educational Service Unit #10, Kearney, Nebraska, 1975 b.

A Screening System For Identifying Mild to Moderate Behavioral Problems In Secondary Students

Pilot Models For
Mainstreaming Students
With Behavioral Disorders

Prepared By
Selection Research, Inc.
Lincoln, Nebraska

A Screening System For Identifying Mild to Moderate Behavioral Problems In Secondary Students

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James Schulte
ESU #10

As part of a Title IV-C project sponsored by ESU #10 a screening procedure for identifying secondary level students exhibiting mild to moderate behavioral problems was developed. The screening system was locally developed because review of literature failed to uncover a screening system that met the following criteria:

1) Total screening time per student of one hour or less.
2) The screening system would provide quantitative results.
3) The screening system could be used with personnel of limited experience and training in the area of emotional disturbance.
4) The screening system would capitalize on the available knowledge and skills of involved personnel.
5) The screening system involves input from both school staff and the individual student.

The screening system developed that met all of the above criteria is presented as Figure 1.

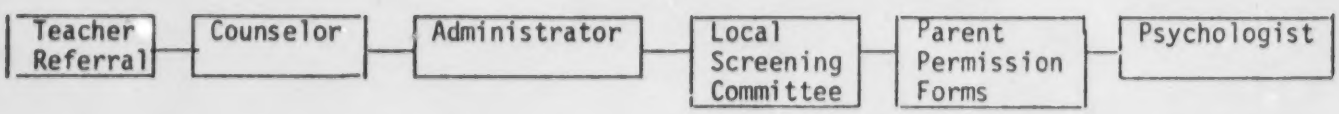

FIGURE I
Screening System For Mild to Moderate Behavioral Problems in Secondary Students

The screening system commenced with the classroom teacher completing the Student Referral Form (SRF). The SRF is a behavioral rating instrument completed by the teacher and yields six scores that describe the student's behavior. The areas covered by the SRF are Socialization, Anxiety, Relation to Authority, Activity Level, Negative Acting Out, and Reaction to School. In addition to the SRF, two attitude scales are administered to the referred students at the time of referral. The Attitude Toward School Scale-ATS (Hoeltke, 1972) and the Self-Concept As A Learner Scale-SCAL, (Hoeltke, 1972) are directly administered to the student.

Results from the SRF, ATS, and SCAL are forwarded to the school counselor for review. If the counselor concurs with the referral, the referral is forwarded to the school administrator. If the school administrator concurs with the referral, the referral goes to a local screening committee. The screening committee is composed of a minimum of five local staff members: A school administrator, a counselor, and three teachers that know the student. Results from the SRF, ATS, and SCAL are reviewed as well as other known information about the student. Given the available information plus the synergistic effect of the staffing, the decision is made to either continue the referral or hold the referral at the local school. If the referral is continued the required parental permission forms are completed and the psychologist then commences diagnosis.

The system described meets all of the initial criteria. The time required for any one referral is less than one hour including the staffing. The system is data based and can be implemented by staff with limited familiarity with behavioral maladjustment. While the system does not assume extensive knowledge of behavioral maladjustment, it does capitalize on available skills. Finally, the system is based on both teacher observation of the student and the student's self-perception. In addition to meeting criteria, one other spin-off effect was noted,

the staffing served as an excellent inservice forum.

While the system meets the five criteria, the question remains, does the system identify mild to moderate behaviorally maladjusted students? During the 1975-1976 school year 37 students were referred through the system. Of the 37 referrals, 35 or 95% were diagnosed as behaviorally maladjusted by a certified school psychologist. Also, the results associated with referral students were tested against results from a sample of nonreferred students. On every variable the referred students earned significantly lower scores than the nonreferred students (Hoeltke, 1975).

The results presented indicate that the screening system did identify students referred as mild to moderate behaviorally maladjusted students. However, it was not established if the system picked up all mild to moderate behaviorally maladjusted. This is a real question but research has not been completed on this issue.

In summary, a screening system was developed to identify mild to moderate behaviorally maladjusted students. The system met five criteria and had additional desirable effects. Most important, the screening system did identify mild to moderate behaviorally maladjusted students.

(Readers interested in the screening system should contact Mary Lou Toker, Director, Pilot Models Project, ESU #10, Kearney, Nebraska.)

References

Hoeltke, G. M., Attitude Toward School Scale, Lincoln, Nebraska; Selection Research, Inc., 1972.

Hoeltke, G. M., Self Concept As A Learner Scale, Lincoln, Nebraska; Selection Research, Inc., 1972.

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Diagnostic Testing In The Pilot Models Project

Project Sponsored By

E.S.U. #10

Kearney, Nebraska

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Selection Research, Inc.

Lincoln, Nebraska

Diagnostic Testing In The Pilot Models Project

Diagnostic Testing Procedure

After a child has been referred to the Pilot Models project and a parent permission form has been obtained to diagnostically evaluate the child, the project psychologist commences the diagnostic testing procedure. The diagnostic testing has been standardized to a basic set of procedures, but prior to the establishment of a basic procedure, various instruments and techniques were considered and/or tried. The basic procedure now followed has been in operation for approximately one project year so results associated with the current procedure are restricted to those students referred to the project during the last year.

The basic diagnostic battery now used in the project is composed of the following:

1) The Wide Range Achievement Test (WRAT).
2) The House-Tree-Person Test (HTP).
3) The Bender Visual-Motor Gestalt Test (BG).
4) Incomplete Sentences Test (Inc. Sent.).
5) The Wechsler Intelligence Test for Children - Revised (WISC-R).
6) In class observation of the child.
7) Discussion with the child's teachers.
8) Review of all screening data (a separate report is available on this topic).
9) Review of the cumulative record of the child.

Several of the instruments and procedures used in the diagnostic procedure do not provide quantitative data. The purpose for including the qualitative procedures is because of the clinical insight provided.

The results associated with all diagnostic evaluations are prepared in written form by the project psychologist. The diagnostic report includes quantitative data and a narrative analysis of all information, quantitative and qualitative. Also included in the diagnostic report are recommendations forwarded by the psychologist. Included in the recommendations is certification of the child as project eligible if such certification is justifiable. Copies of all diagnostic reports are maintained in project records.

Characteristics of Diagnosed Students

As noted above, the current diagnostic procedure developed with the project and initial procedures did not include some of the instruments and procedures now used. Consequently, when describing the characteristics of diagnosed students the number of students the results are based on will vary.

It was also noted that some of the diagnostic instruments do not yield quantitative data. To describe student characteristics, the project psychologist reviewed the protocols of students and made a judgement as to whether the results from a given instrument indicated problems in each of the six behavioral areas included in the project. The psychologists judgement was dichotomized into either the protocol for a given instrument reflected a problem or did not reflect a problem.

When making the judgement as to whether a problem was, or was not, reflected in the clinical instruments the psychologist combined the results for the House-Tree-Person Test and the Bender Gestalt Test. On the basis of the combined protocols, the psychologist indicated if a problem was reflected in each of the six behavioral areas. A separate judgement on whether a problem was reflected in each behavior area was made using the results from the Incomplete Sentence Test. The results derived from the judgements made from the protocols are given in Table 1.

Table 1
Percent of Students Showing
Diagnostic Indicators of Problems
In Each Screening Area
(N=59)

Diagnostic Instrument	Behavioral Level I (Socialization)	II (Anxiety)	III (Authority)	IV (Activity)	V (Acting Out)	VI (School)
B.G./H.T.P.	88	100	15	27	83	0
Incomplete Sentences	69	91	15	29	24	75

As given above, B.G./H.T.P. protocols indicated that 88% of the students had socialization problems, 100% of the students had anxiety problems, 15% of the students had problems with authority figures, 27% had activity level problems, and 83% of the students protocols indicated problems with negative acting out. The B.G./H.T.P. protocols did not indicate that any student had negative feelings toward school.

Generally speaking the Incomplete Sentences protocols were consistent with the B.G./H.T.P. protocols in the first four behavioral areas in terms of frequency. However, Incomplete Sentence protocols indicated far less frequent negative acting out problems but far greater frequency of negative attitude toward school.

Using the dichotomized judgement procedure the number of problem areas per child was derived. The number of problem areas per child are summarized in Table 2.

Table 2
Percent of Students Reflecting One or More
Problem Areas on Clinical Protocols

Diagnostic Instrument	Number of Problem Areas (% of Students) 0	1	2	3	4	5	6	$\bar{X}$	s
B.G./H.T.P.	0	0	17	53	29	2	0	3.15	.71
Incomplete Sentences	0	5	20	44	27	3	0	3.03	.91

Using the B.G./H.T.P. protocols most students (53%) reflected problems in three behavioral areas. On these protocols no student had 0 or 1 problem area nor did any student have problems in all six behavioral areas. The average number of problem areas was 3.15 with a standard deviation of .71.

The results associated with the Incomplete Sentences Test paralleled the B.G./H.T.P. results. Using Incomplete Sentence protocols, the average number of problem areas was 3.03 with a standard deviation of .91.

Results from the Wechsler Intelligence Scale for Children, Revised, were summarized and the results are given in Table 3.

The average performance of project students indicates that as a group they are in the low average range of ability. In terms of subtests the sample was highest in Comprehension, Picture Arrangement, and Similarities. Lowest average results were on the subtests of Coding, Information and Vocabulary.

In addition to the results given above, there are additional results. Specifically, there are results associated with the Wide Range Achievement Test. The WRAT results, along with age, grade, etc. data are reported in a separate analysis so are not given here.

Summary

This paper describes the diagnostic procedures used in the Pilot Models project and the diagnostic results associated with students that have gone through the procedure. The general student characteristics reflected in project students is that they have problems in more than one behavioral area and are of low average scholastic ability.

Table 3
Performance on The WISC-R

Subtest	N	$\bar{X}$	s
Information[1]	69	8.42	2.52
Similarities[1]	69	9.35	2.90
Arithmetic[1]	69	8.84	2.75
Vocabulary[1]	69	8.72	2.19
Comprehension[1]	69	10.00	2.65
Digit Span[1]	46	9.02	3.84
Picture Completion[1]	69	9.00	2.22
Picture Arrangement[1]	69	9.48	2.86
Block Design[1]	69	8.83	2.41
Object Assembly[1]	69	9.33	3.04
Coding[1]	67	8.61	2.46
Verbal IQ[2]	69	93.97	11.53
Performance IQ[2]	69	93.25	10.75
Full Scale IQ[2]	69	92.78	10.44

[1]Results given as standard scores.

[2]Results given as intelligence quotient scores.

Parent Involvement System

Pilot Models For

Mainstreaming Students

With Behavioral Disorders

Prepared By

Selection Research, Inc.

Lincoln, Nebraska

Parent Involvement System

Parent involvement is an extremely important aspect of the total educational process but when dealing with children having behavioral problems the need for parental involvement is even greater. When dealing with behavioral problem students the success of any program designed to help the student is, in large measure, contingent upon the degree of parent cooperation and support.

Because of the central role of parent involvement, a parent involvement system was designed. Before designing the parent involvement system, a set of specific criteria were identified, these criteria were to be incorporated in any system developed. The criteria were:

1. Is concise and direct enough to be judged as workable by all involved staff.
2. Makes it highly desirable to have parent involvement during the initial stages of referral.
3. Allows for input from parent.
4. Makes provision for specific recommendations based upon behaviors, attitudes, and academic achievement, and utilizing project developed strategies for each of these.
5. Provides a system for keeping parents involved throughout the student programming.
6. Develops exit plans and procedures at the time of entry and obtains parent approval of these at that time.

Based on the criteria a system was developed and implemented. The parental involvement system developed and implemented was as follows.

Initial parent involvement was after the local screening committee had decided that the child was having behavioral problems in school. Members of the

screening committee were to meet with the parents and review all available information and discuss committee recommendations. If the recommendations included a psychological evaluation of the child, parent permission for the evaluation was requested during this session.

Assuming parent permission for a psychological evaluation was available, the evaluation was made and the examining psychologist informed the parents of the results. Results of the evaluation were also forwarded to the local staffing team. Parents were invited to be a part of the staffing team and the team, along with parents, developed an individual educational plan for the student. If the plan included project placement, parents had to provide written agreement for the placement. Also included in the plan were project exit criteria.

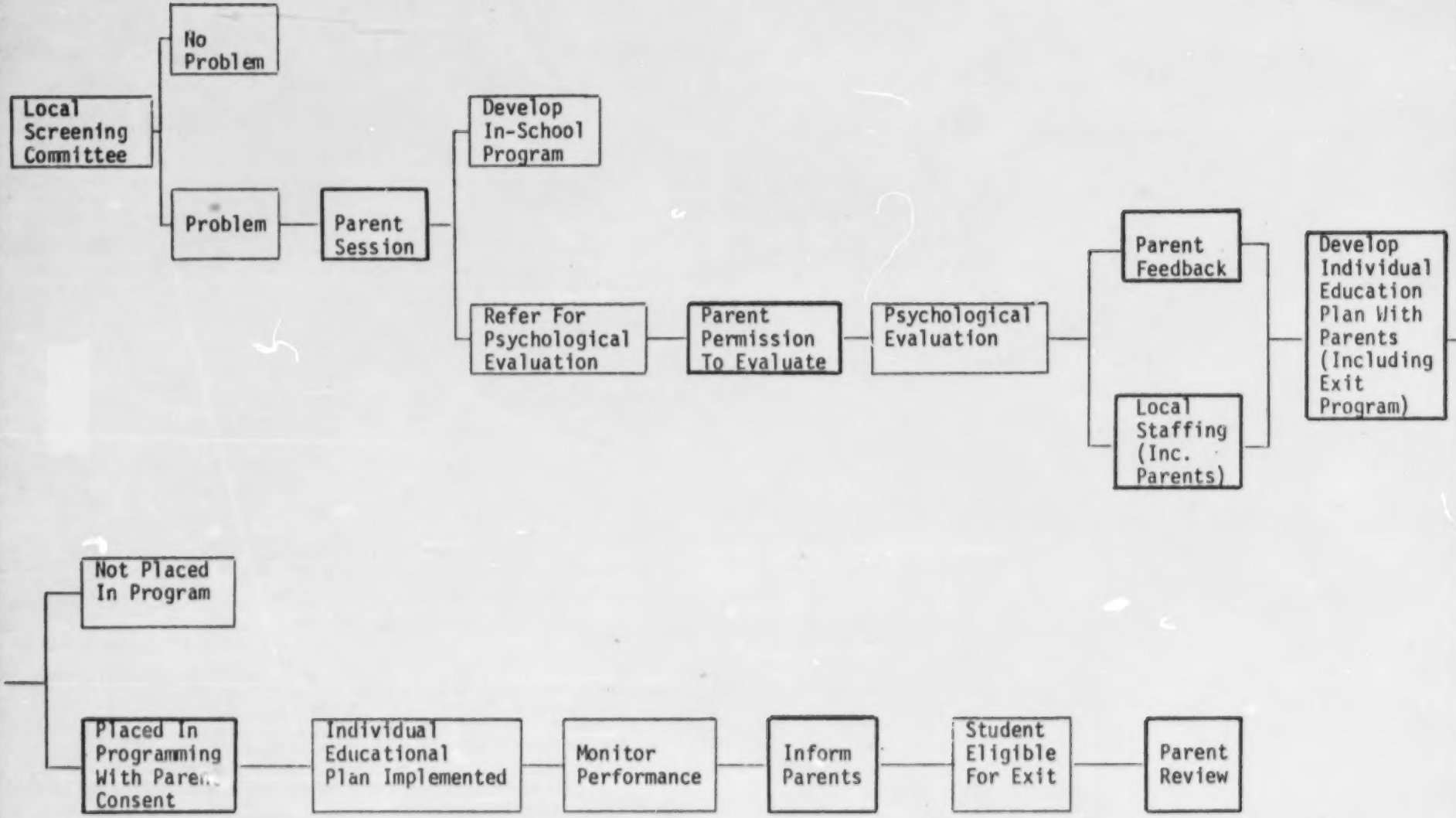
Following the development of the plan that included project placement, the plan was implemented. Systematically the student's progress in the project was monitored with monitor results forwarded to the parents. In addition to the monitor results parents were informed of other developments as appropriate. Telephone conversations, teacher-parent conferences, and written communications were used to keep parents informed.

When the student was ready to leave the project a session was held with the parents. This session reviewed the reason for placement and subsequent student development. At this session parents were encouraged to indicate if they felt the child was ready to leave the project.

Starting with the first parent session and at any subsequent parent session, recommendations for improving the home conditions could be made. These recommendations could be for altered behavior patterns or could be suggested parent readings or any of several other possibilities. When home recommendations were made, it was imperative that follow-up be carried out to determine if the recommendations had been tried and with what success.

The parent involvement system described above is given in Figure 1. Specific points of parent involvement are noted in Figure 1 by heavy lines.

The system described met the original six criteria for a parent involvement system. Project experience supports the view that the system was workable and parents responded favorably. Student outcome results of the project were, in part, due to the specified degree of parent involvement.



Project Model With Parent
Involvement Points Indicated

Instructional Procedures In The Pilot Models Project

Pilot Models For
Mainstreaming Students
With Behavioral Disorders

Prepared By
Selection Research, Inc.
Lincoln, Nebraska

Instructional Procedures In The Pilot Models Project

The basic instructional strategy used in the Pilot Models project is prescriptive instruction. Prescriptions are derived from the diagnostic profile of the student and the educational plan prepared for the student. Sequentially the diagnostic profile is developed and the educational plan is based on the profile. The educational plan is prepared by a staffing team of which the resource teacher is one of a minimum of four members. The educational plan reflects what the student's needs are and the priority of those needs. Educational prescriptions are a direct outgrowth of the plan and the educational prescriptions should directly reflect the plan specified needs and priorities. Educational prescriptions are directly under the control of the resource teacher. The educational prescriptions are the tactical level while educational plans are the strategic level and the diagnostic profile is the needs assessment.

Given the role and definition of the education prescription, it becomes quickly apparent no one educational prescription is appropriate for all students nor for all students in need of help within one of the ten project covered areas. Rather, an individualized educational prescription is needed for each student. Since the educational prescription is individualized only examples of procedures appropriate for a given deficit area can be forwarded. In the pages that follow examples are forwarded for each of the ten project covered areas. The ten areas, with examples of instructional procedures, are Socialization, Anxiety, Relation To Authority, Activity Level, Negative Acting Out, Reaction To School, Attitude Toward School, Self-Concept As A Learner and Reading/Mathematics.

Deficient Area: Socialization

This might also be called a friendliness factor. A child with socialization problems may have difficulty making friends, tends to be a loner, and is shunned

or rejected by others.

To help a student overcome these characteristics, you should provide him with as many non-threatening social opportunities as possible. You might place the child in group activities where he has an opportunity to interact with peers. You can assist the student in developing interests and in communicating with others.

Deficient Area: Anxiety

This child may be distressed or be apprehensive of danger or misfortune. Characteristics of anxiety are tension, being overly sensitive, and being fearful.

In working with a child with these characteristics, you will want to try to reduce the tension and fearfulness by increasing the child's ability to function productively. Provide the child with opportunities to express his feelings. Place the student in group situations that will assist in alleviating tension. Develop an empathetic climate. Help the child in developing an understanding of himself. Help the child develop interests.

Deficient Area: Relation To Authority

Students who would be rated low in this factor would be those in conflict with authority figures. This conflict would probably be manifest through resentment, lack of cooperation, or anger. This child resents demands placed upon him, has a conflict with teachers and is uncooperative.

To assist this child, help him to develop interests. Provide structure through classroom management techniques. Give the child the opportunity to express himself. Try to provide a firm, but fair, environment. Encourage the child to control his anger. Give the child the opportunity to take a look at himself and at himself in relation to authority. Place the student in a position, either real or simulated, of authority.

Deficient Area: Activity Level

This factor assesses the student's activity level in class. This student is active in class in nonproductive ways, or in other words, is the class show-off. A low score would not necessarily indicate any conflict with authority or destructive behavior. This student is generally distractible, needs supervision and looks to others for attention.

To help the child with these characteristics, you should recognize his accomplishments. Help the student develop independent work habits. Assist the student in analyzing his own behavior. Provide close, fair, firm supervision of tasks. Place the child in appropriate group environments and activities.

Deficient Area: Negative Acting Out

Students who have low scores in this area are generally problem children in the classroom. From a social point of view, this behavior characteristic may be more serious than others. The child may be destructive, use profanity and tell lies.

In working with this student, you must provide firm, fair structure. The child may need individual counseling. Help the student develop the ability to communicate productively. You should encourage self-understanding and motivation. This child can be placed in appropriate group situations.

Deficient Area: Reaction to School

Students who score low are probably turned off to the school environment and dislike school and school activities. Attendance at school by students scoring low on this factor would be based on variables other than enjoyment of school and school work. This student dislikes school, is bored and easily frustrated and apparently lacks motivation.

Deficient Area: Attitude Toward School

The attitude toward school instrument attempts to reflect the student's feelings toward school. Included with this variable is how the student feels

about attending school, the assigned school work, teachers, rules and regulations, the school environment and motivation.

To help a child develop a positive attitude toward school, help him develop interests. Provide for the student with opportunities for personalized learning based upon his needs and interests. Use motivation techniques and help the student develop communication skills. Try to cultivate the value of learning.

Deficient Area: Self-Concept As A Learner

This reflects the student's feelings about himself in relationship to learning. This focuses on how the student sees himself within the academic situation. This includes the student's feelings about school, the ability to succeed, motivation, school work and his feelings about himself as compared to other students in ability and achievements.

You should make a concerted effort to develop this child's interests. Provide individual learning activities. Help the child in his ability to communicate. Encourage self-expression. Provide the student with opportunities to succeed, and build on the student's strengths.

Deficient Area: Reading and/or Mathematics

In these areas, you should stress high interest rather than a remedial strategy. The programming should be consistent with and supportive of that being done in the behavior and attitudinal areas.

Additional Information

The above are but examples of specific procedures appropriate for the different deficient areas but each example can be incorporated into an educational prescription. By developing and implementing educational prescriptions students can be aided and the results associated with thePilot Models project can be attained in other schools with other students.

A more comprehensive list of procedures appropriate for each area is given in the Teachers Manual of the Project.

Project Exit Procedure

Pilot Models For

Mainstreaming Students

With Behavioral Disorders

Prepared By

Selection Research, Inc.

Lincoln, Nebraska

Project Exit Procedure

For any student in the project the exit procedure will be on a step-by-step basis. The procedure will cover a period of two or more months and during that time tne degree of direct project involvement in the educational program of the student will become progressively less. While the direct involvement becomes less, the indirect involvement is either maintained or may actually increase. Specific exit procedures are given schematically in Figure 1 with a narrative of the procedure given after the Figure.

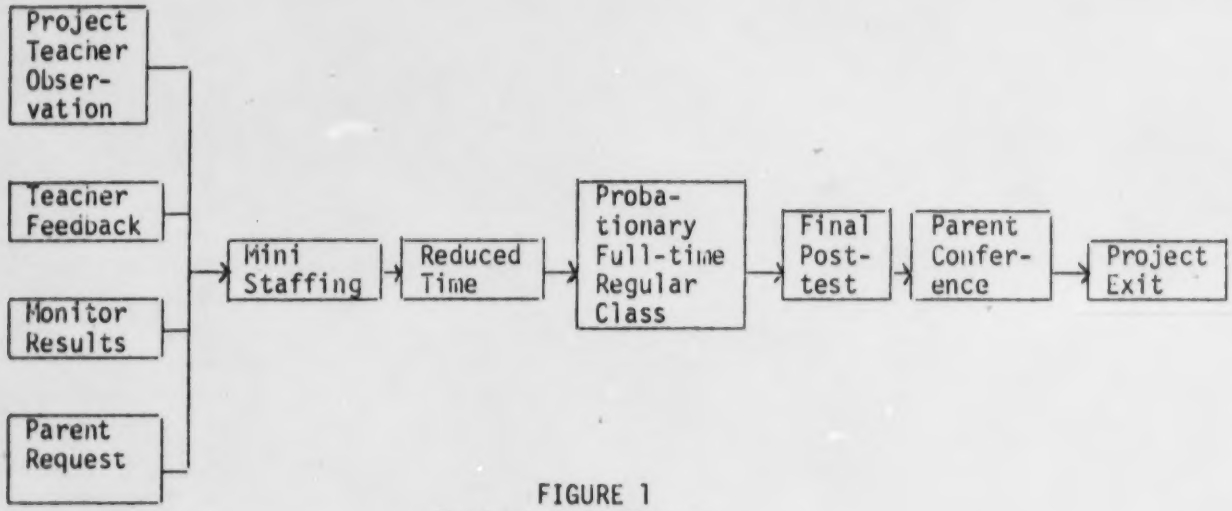


FIGURE 1
Project Exit Figure

As reflected in Figure 1, the initial step leading to exit can commence from any one of four points. The exit procedure can be initiated by the project teacher, a regular classroom teacher that has the student, by administrative procedures based on the quarterly monitoring results or through parent request. The precise form of the initiation may be quite informal and need not be based on a system of forms but basic records that identify the initiation should be maintained.

Once the initial request is made to consider exit procedures, a "mini staffing" will be conducted. The mini staffing will involve the project teacher, the project director, the local administrator, the project psychologist and appropriate teachers. While all of the preceding should be involved, it is not necessary that all attend a specific meeting. An acceptable procedure for this step is to handle the "mini staffing" as a series of informal discussions. The project teacher is the critical element in this informal procedure whereby the project teacher would meet and discuss the possibility of commencing exit procedures with each of the listed individuals.

If the concensus of the "mini staffing" group concurs with the initiation of the exit procedure, the project teacher and appropriate regular teachers will concurrently develop a plan for reducing the student's time in the project and increasing time in the regular classroom. The plan developed in this way will be submitted for administrative approval and will be reflected in the student's project prescriptions. During the period of reduced project time, the project teacher will meet on a weekly basis with all involved regular class teachers to review the student's progress and to recommend both techniques of working with the student and recommending materials to use with the student.

If the student's progress during reduced direct project time is satisfactory, the project teacher, regular teachers, and project psychologist will develop a plan for placing the student full time in regular classes and the student no longer will be in attendance in the project class. The initial full-time regular class placement will be a probationary time for this student and the student will be officially maintained as a project student. During the probationary period the project teacher will maintain weekly liaison with the regular teacher to determine how well the student is doing and to offer suggestions on how to effectively work with the student and possible materials to use with the student.

The plan for the student during the probationary period will be approved by the administration prior to implementation, and the written plan will be maintained in project records. During the probationary period no daily or weekly prescriptions will be prepared, but notes on the weekly review sessions will be maintained in project records.

When the project teacher, appropriate classroom teachers and the project psychologist concur that project services are no longer required for a student and that the student's behavior is satisfactory, the final posttest will be administered. The posttest battery will replicate the pretest screening battery, specifically, the SRF, ATS, SCAL and WRAT. Posttest results will be included in project records.

After the posttest is administered, a final parent conference will be conducted. The final parent conference will review the student's pretest - posttest results, the student's project program and, if appropriate, recommendations for the continued development of the student.

The student is officially dropped from the project at the time of the final parent conference. It is assumed at this time that the initial behavioral problems of the student have been corrected and no further major behavioral problems are anticipated.

If a student's behavior regresses during the reduced time period or during the probationary period, the student is returned to the project class. Returning a child to the initial project program will be based on a joint discussion of administration, project teacher, project psychologist and appropriate classroom teachers. However, if the behavioral regression occurs after the child has been officially terminated from the project, the student is then processed as a "new" project student and all screening and diagnostic procedures will be followed.

Abstract of Student Based Results
(First Two Project Years)

Pilot Models For Mainstreaming
Students With Behavior Disorders
Project

Prepared By

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ESU #10

Pilot Models For Mainstreaming Students With Behavioral Disorders

Abstract Of Student Based Results[1]

From the onset this project has been data based in terms of student behavioral outcomes. Before students were enrolled in the project, quantified data was collected on each student and each student was re-evaluated at the end of the school year. Results from the pre and post assessment were compared to determine the extent of change among the project students and the results from project students were compared to results from nonproject students.

For program evaluation purposes the student based results included the areas of basic achievement, behavior as perceived by the teacher, and student reported attitudes. A total of 11 different specific areas were evaluated. Three of the 11 specific areas were basic achievement areas, reading, spelling and arithmetic. Six of the specific areas were behavior areas, Socialization, Anxiety, Relation To Authority, Activity Level, Negative Acting Out, and Reaction to School. The two specific attitude areas were Self-Concept As A Learner and Attitude Toward School.

The three achievement areas were evaluated via the Wide Range Achievement Test (WRAT). The reading, spelling, and arithmetic sections of the WRAT were individually administered to each project student at the time the student entered the project and again at the end of the school year.

The six behavioral areas were evaluated using the Student Referral Form, Revised (SRF-R). The SRF-R was developed and evaluated by the project. The instrument was composed of 24 short behavioral descriptive statements (Difficulty In Making Friends, Conflict With Teachers, etc.). Each statement was rated

[1]Abstract prepared by Selection Research, Inc., Lincoln, Nebraska . Gary M. Hoeltke

across four alternatives, the alternatives range from Never/Seldom Observed to Severe Problem. The instrument was completed by the students teacher(s).

The two attitude areas were assessed using the Self-Concept As A Learner Scale and the Attitude Toward School Scale. Both attitude scales were directly administered to the students. Each instrument was composed of 25 or fewer self-descriptive items with five response alternatives per item. The response alternatives ranged from Strongly Agree to Strongly Disagree.

All project students were diagnosed as emotionally disturbed by a certified school psychologist. All students were enrolled in secondary level grades with over 90% from the Junior High School level. Project students were enrolled in several different schools, the schools ranged from very small rural schools to schools in cities of more than 20,000 population.

Results

Achievement Data

Two comparisons involving the achievement results were made. One comparison was a direct pre-post comparison, the second comparison was between the actual change in scores and the expected change with expected defined from the age of the student. The results of the comparisons are summarized in Table 1.

Table 1
Project Student Achievement Results[1]

		Grade When Entered		Time In Project		Pretest Results		Posttest Results			Expected Gain	
	N	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$ Gain	Time	Historical
Reading	39	8.1	1.2	.3	.1	7.2	2.8	7.8	2.4	.6	.3	.25
Spelling	39	8.1	1.2	.3	.1	5.9	2.3	6.4	2.3	.5	.3	.2
Arithmetic	39	8.1	1.2	.3	.1	5.8	1.7	6.4	2.0	.6	.3	.2

[1]All results expressed as grade placement units.

A review of Table 1 indicates the following results:

1) At the time of project entry, the students were approximately one grade behind in reading and just over two grades behind in spelling and arithmetic.

2) While in the project the students gained approximately twice as much in each subject as expected when expected was defined by either actual time in the project or on the basis of their historical development. The gain was consistent for all three subject areas.

3) Subsequent inferential statistical testings indicated that all results were statistically significant at the .05 level of probability.

Behavior Data

Behavioral data was collected across six areas. The data was collected by having the teachers rate the students behavior on each of six areas. The results associated with the six areas are summarized in Table 2.

Table 2[1]
Project Student Behavioral Results

		Project Students						
		Pretest		Posttest				
Area	N[2]	$\bar{X}$	s	$\bar{X}$	s	Mean Gain	Nonproject Students	Maximum Possible
Socialization	19	6.4	2.1	7.8	3.3	1.4*	11.4	12
Anxiety	22	7.4	2.2	9.3	2.6	3.3*	11.7	12
Authority Relation	26	9.8	3.4	12.4	2.8	2.6*	15.7	16
Activity Level	23	5.0	1.4	8.2	2.3	3.2*	10.3	12
Negative Acting Out	24	8.6	1.8	10.7	1.9	2.1*	11.9	12
Reaction To School	36	7.4	2.4	8.2	2.4	.8	11.7	12

[1] All results reported in raw score units

[2] Only Project students scoring one or more s of normal students included.

* $p \leq .05$

A review of Table 2 indicates the following:

1) The area that most students are judged to be showing the greatest behavior problems in is Reaction School followed by Relation To Authority Figures.

2) Project students showed a statistically significant gain on five of the six areas, the one area that did not reflect a statistically significant gain was Reaction to School.

3) While project students showed a statistically significant gain, they were at the end of the project year still significantly lower than nonproject students. The project sample was significantly lower than nonproject students in all six areas.

Attitude Data

At the time of entry all project students were administered the Self-Concept As A Learner Scale and the Attitude Toward School Scale. Both instruments were readministered at the end of the school year. The results for both instruments are summarized in Table 3.

Table 3 [1]
Project Student Attitude Results

		Project Students						
		Pretest		Posttest		Mean	Nonproject	Maximum
	N	$\bar{X}$	s	$\bar{X}$	s	Gain	Students	Possible
Self-Concept	37	52.4	9.5	57.7	14.4	5.3*	69.0	100
Attitude School	37	66.9	11.1	68.0	14.6	1.1	73.8	110

[1] All results reported in raw score units

*$p \leq .05$

A review of Table 3 indicates:

1) Project students scored significantly higher (more positive) on the posttest than on the pretest on the Self-Concept As A Learner Scale but the posttest of the Attitude Toward School Scale was not significantly higher than the pretest score.

2) Posttest project students' results were significantly lower than the nonproject student results. This outcome was true for both instruments and even after the project students scored significantly higher on the posttest than pretest on the Self-Concept As A Learner Scale.

Limitations

The results reported above were very positive but it must be recognized that the results were based on relatively small samples and the time between project enrollment and end of school year was only approximately three months. Also, the results reported above represented students enrolled in a resource room with a resource teacher and students that received service only through an itinerant resource teacher. Finally, no true control sample was available because it was politically necessary to service all eligible project students, students could not be randomly placed into the project.

The reported results apply to only secondary level students, predominately junior high school age students. A few senior high school students were included but they represented a small minority of the students.

Pilot Models For Mainstreaming Secondary Students With Behavioral Disorders

Abstract of Third Year Results (1976-1977 Project Year)

Prepared By

Selection Research, Inc.

Lincoln, Nebraska

Pilot Models For Mainstreaming Secondary

Students With Behavioral Disorders

Abstract of Third Year Results
(1976-1977 Project Year)

At the end of each project year a comprehensive end of year evaluation report was prepared. The end of year evaluation report covered all parts of the total project of which student results were but one part. While student results were only a part of the total evaluation they were of major importance and, in the ultimate sense, they were the purpose of the total project.

Because of the importance of the student outcomes this report was prepared. The purpose of this report is to present a summary of student outcome results. The summary was derived from the end of year evaluation report that was originally reported in the summer of 1977.

Consistent with each of the preceeding project years the student outcomes were evaluated through a data based evaluation system. Before a student was actually enrolled in the project the student was pretested across ten variables and students were reevaluated at the end of the year across the same variables. Results from the pre and post variables were compared to determine the extent of change among the project students. Results of the project students were also compared with results of a comparison sample to determine the extent project treatment procedures were effective.

For the evaluation, treatment students were defined as those individuals that received prescriptive instruction in a given treatment area. Comparison students were project students that did not receive prescriptive instruction in a given treatment area. Thus, project students that received prescriptive instruction in Socialization (one of the treatment variables) were compared with project students that did not receive prescriptive instruction in

Socialization. When the evaluation was completed on Anxiety (a second treatment variable) students receiving prescriptive instruction in this area were compared with project students that did not receive prescriptive instruction in this area.

The ten variables included in the evaluation were six behavioral variables, two attitudinal areas and two basic achievement areas. The ten variables used in the evaluation and the instrument used to measure the variable are given in Table 1.

Table 1
Areas Included In The Evaluation and
Instruments Used To Measure The Variable

Evaluated Area	Instrument
1. Socialization	Student Referral Form
2. Anxiety	Student Referral Form
3. Relation With Authority Figures	Student Referral Form
4. Activity Level	Student Referral Form
5. Negative Acting Out	Student Referral Form
6. Reaction To School	Student Referral Form
7. Self Concept As A Learner	Self Concept As A Learner Scale
8. Attitude Toward School	Attitude Toward School Scale
9. Basic Reading Skills	Wide Range Achievement Test
10. Basic Mathematics Skills	Wide Range Achievement Test

The analysis technique used was analysis of variance. The specific analysis of variance procedure used was a two-factor design with repeat measures on one factor.

Statistical significance was defined as the .05 level of probability for all analyses.

Results

Behavioral Variables

The pre and post descriptive results for students receiving prescriptive instruction in each of the six behavioral areas and students not receiving prescriptive instruction are given in Table 2. Values reported in Table 2 are raw score values derived from the Student Referral Form.

Using the pre-post results students receiving prescriptive instruction were compared with students that did not receive prescriptive instruction in the treatment area. Results of the comparison are summarized in Table 3.

The key outcome of the analysis was the interaction effect. The interaction effect directly reflects relative change by sample between pre and post administrations. It will be noted that across all six behavioral areas the interaction effect was statistically significant. Literally interpreted the significant interaction values indicate that the students receiving prescriptive instruction made pre-post gains while students that did not receive prescriptive instruction in the behavioral area made either no pre-post change or actually earned lower post scores.

Since all interaction effects were significant no attempt was made at interpreting the two main effects analysis. In the event of a significant interaction no clean interpretation of a main effect can be forwarded because of demonstrated confounding.

Attitude Variables

The procedures followed when evaluating the two attitude variables were the same as for the behavioral variables. Table 4 presents a summary of the descriptive attitudinal results, the values reported in Table 4 are raw score values.

Table 2
Descriptive Results Across Behavioral Variables

Behavioral Area	Received Prescriptive Inst.					No Prescriptive Inst.				
		Pretest		Posttest			Pretest		Posttest	
	N	$\bar{X}$	s	$\bar{X}$	s	N	$\bar{X}$	s	$\bar{X}$	s
1. Socialization	17	5.82	1.74	7.94	3.01	22	10.55	1.26	10.09	2.16
2. Anxiety	16	6.50	2.19	8.56	2.83	23	11.57	.66	10.91	1.28
3. Relation With Authority	12	10.17	2.13	11.58	3.66	27	15.33	.92	14.26	2.26
4. Activity Level	21	5.95	1.40	7.24	1.97	18	10.56	1.29	9.67	2.59
5. Negative Acting Out	8	9.63	.52	11.50	.75	31	11.94	.24	10.87	2.09
6. Reaction To School	22	6.41	1.68	7.68	2.59	17	10.47	1.13	9.53	2.35

Table 3
Analysis of Variance Results Across
The Six Behavioral Variables

Behavioral Area	Pre-Post Comp. df	F	P	Treat-NoTreat Comp. df	F	P	Interaction df	F	P
1. Socialization	1,74	1.98	NS	1,74	51.60	S	1,74	7.23	S
2. Anxiety	1,74	1.29	NS	1,74	80.88	S	1,74	10.84	S
3. Relation With Authority	1,74	4.14	S	1,74	53.62	S	1,74	8.81	S
4. Activity Level	1,74	.44	NS	1,74	68.40	S	1,74	6.54	S
5. Negative Acting Out	1,74	2.21	NS	1,74	4.78	S	1,74	14.61	S
6. Reaction To School	1,74	.44	NS	1,74	40.15	S	1,74	5.64	S

Table 4
Descriptive Results Across Attitudinal Variables

	Received Prescrip. Inst.					No Prescript. Inst.				
		Pretest		Posttest			Pretest		Posttest	
Attitude	N	$\bar{X}$	s	$\bar{X}$	s	N	$\bar{X}$	s	$\bar{X}$	s
Self Concept	6	39.17	8.52	49.67	9.05	25	61.96	8.48	61.96	11.20
Attitude School	8	46.63	5.68	55.88	15.67	23	75.52	9.56	74.74	11.47

Using the same data analysis technique the pre-post results, treatment-no treatment, and administration x treatment results were evaluated. The results of the analysis are given in Table 5.

Table 5
Analysis of Variance Results Across
Two Attitudinal Variables

Attitude	Pre-Post Comp. df	F	P	Treat-No Treat Com. df	F	P	Interaction df	F	P
Self Concept	1,58	.67	NS	1,58	31.36	s	1,58	2.81	NS
Attitude School	1,58	.43	NS	1,58	57.33	s	1,58	2.53	NS

As reported in Table 5 the only differences that were statistically significant were between the treatment and no treatment samples but, by the method of placement, this difference was expected. In neither case was the interaction effect significant, this indicates that in the two attitude areas the rate of change between groups was within sampling fluctuation outcomes. The absence of interaction indicates that treatment and no treatment samples made essentially the same shift between the pre and post test administrations.

Achievement Variables

Achievement results were summarized using grade placement units. The pre-post grade placement results by treatment-no treatment are given in Table 6.

Table 6
Descriptive Results Across Achievement Variables

Achievement	Received Prescriptive Inst. N	Pretest $\bar{X}$	Pretest s	Posttest $\bar{X}$	Posttest s	No Prescriptive Inst. N	Pretest $\bar{X}$	Pretest s	Posttest $\bar{X}$	Posttest s
Reading	8	7.9	1.4	8.8	1.4	22	10.1	1.3	10.8	1.5
Arithmetic	14	7.8	.7	8.5	.8	16	8.2	9	8.4	.7

The analysis of variance results for the achievement variables are summarized in Table 7.

Table 7
Analysis of Variance Results Across
Two Achievement Variables

Achievement	Pre-Post Comp.			Treat-No Treat Comp.			Interaction		
	df	F	P	df	F	P	df	F	P
Reading	1,56	4.47	S	1,56	27.29	S	1,56	.03	NS
Arithmetic	1,56	4.50	S	1,56	.46	NS	1,56	1.66	NS

Interaction effects for both reading and arithmetic were not significant. In reading both the main effects were significant indicating there was both a pre-post significant change and the treatment-no treatment samples were significantly different. The absence of significant interaction indicates that the rate of change over time was the same for both groups. The same essential results were obtained in arithmetic. Arithmetic scores significantly changed but the rate of change was the same for the treatment-no treatment sample.

Recognize - Respond - Reinforce

Summary of Validation Results

Introduction

Pilot Models For

Mainstreaming Students

With Behavioral Disorders

Prepared by

Selection Research, Inc.

Lincoln, Nebraska

Recognize - Respond - Reinforce

Summary of Validation Results

Introduction

During the 1973-1974 school year personnel of ESU #10 conducted a needs assessment of programs in the area. Results of the needs assessment included:

1. Local administration indicated that about 5% of their students were in need of a program for mild to moderate behaviorally disordered students.
2. Approximately 100 secondary students were reported to be emotionally disturbed but there was no existing school based program for these students.
3. Over 90% of the administrators felt their staffs were not trained to work with secondary students judged to be mild to moderately behaviorally disordered.
4. No instructional program for secondary students with behavioral problems was available within the E.S.U. area.
5. Education of handicapped students was a priority program area for the Nebraska State Department of Education.

Given the above information an educational program for secondary students judged to be behaviorally disordered was obviously needed. During the Winter and Spring of 1974 a program designed for behaviorally disordered secondary students was designed. The program designed was submitted as an ESEA Title IV-C project and was funded as a developmental project. Project funding commenced in June, 1974.

Project Purpose & Objectives

The purpose of the project was to develop a delivery system within the concept of mainstreaming for secondary students identified as mild to moderately

behaviorally disordered. Inlcuded within the delivery system were direct student services (identification and treatment) and indirect student services (in-service, curriculum, etc.).

Within the total project were performance objectives in the direct and indirect service areas. Direct student service objectives included the two basic objectives of:

1. Project students receiving prescriptive instruction in the low rated behavioral areas[1] (low=approximately 1.5 s below general $\bar{X}$) will do significantly better (.05 level) than a comparison sample in at least three of the six behavioral areas included on the Student Referral Form.
2. Project students that score low on the Self Concept As A Learner Scale that receive project based prescriptive instruction will do significantly better (.05 level) than a comparison sample of students.

Project Intervention

The basic intervention process was the sequence of diagnose-plan-prescription. The diagnosis commenced with referral, the referral included the completion of the Student Referral Form. Students that were rated as behavioral problems on the SRF and met additional criteria were evaluated by a certified school psychologist (with parent permission) and, if the diagnosis confirmed the problem, the child was certified as project eligible. On the basis of the screening and diagnostic data an educational plan was prepared for the student, the plan designated the target area(s) for remediation. With parent permission the child was placed in the project and project-based treatment was based on prescriptive procedures. A basic per-day prescription was prepared and implemented for each

[1]Behavioral Areas:
a Socialization
b Anxiety
c Reaction To Authority
d Activity Level
e Negative Acting Out
f Negative Reaction To School

student, the prescriptions reflecting only the designated behavioral areas given on the individual educational plan. Prescriptions were individually prepared and could include any strategy or technique so long as the strategy or technique was consistent with the educational plans.

The average time per week each student was in the project room was 2 to 3 hours with additional time spent with the child's regular class teachers. Time in project room was devoted to prescriptive instruction.

Project Evaluation Procedures

Evaluation Design

The basic evaluation design was a pre-post, project-comparison design. Schematically, the design was:

Project	Pre Test	Prescription in Designated Area(s)	Post Test
Comparison	Pre Test	No Prescriptive Instruction In Designated Area(s)	Post Test

Data Collection

The Student Referral Form (SRF) was completed by classroom teachers while the Self Concept As A Learner Scale (SCAL) was administered to the student. Both instruments were completed in the fall and during April. The average time lapse between administrations was about six months.

Study Sample

All students used in the study had been diagnosed by a certified school psychologist.

Treatment

Within the total project sample of students who were about one and a half standard deviations below the general mean were those identified as needing prescriptive instruction in the specific area. The students that received prescriptive instruction in the specific area were the treatment sample for that area.

The total project sample was composed of 39 students but the number of project students receiving prescriptive instruction within a given area varied. The specific number of students receiving prescriptive instruction per area is given in Table 1.

Table 1
Number of Students Receiving Prescriptive Instruction Per Area

	Number Receiving Prescriptions	Percent Receiving Prescriptions
SRF Area 1: Socialization	17	43
SRF Area 2: Anxiety	16	41
SRF Area 3: Relation To Authority	12	31
SRF Area 4: Activity Level	21	54
SRF Area 5: Negative Acting Out	8	20
SRF Area 6: Negative Reaction To School	22	56
Self Concept As A Learner	6	15

Comparison

The basic comparison sample was project students that were not receiving prescriptive instruction in the target area. For example, 17 students received prescriptive instruction for Socialization problems (See Table 1) so 22 project students (Total Project Students=39) were receiving prescriptive instruction in other

areas and these 22 were the comparison sample for the Socialization group, The same procedure followed for each other prescriptive area.

On the self-concept variable an additional comparison sample was used. Twenty-seven diagnosed students in a different district were administered the self-concept scale at the same time as project treatment students. These students were similar to the project sample and were enrolled in a mainstream based secondary special education program.

Study Instruments

The Student Referral Form (SRF) was developed for this project. The original instrument was factor analyzed and this analysis yielded the six behavioral areas defined earlier. After the instrument was revised on the basis of factor analysis additional reliability and validity studies were undertaken. The additional studies indicated the revised SRF was both reliable and valid.

The Self Concept As A Learner Scale is over 10 years old and extensive research has been completed on the instrument. The research supports both the reliability and validity of the instrument.

Data Analysis

The analysis of variance design called for two factor mixed with repeat measures on one factor used for the analysis. Given the objectives evaluated, the interaction effort was of specific interest because the interaction F would be a direct reflection of mean change between administrations by treatment. The main treatment effect was of little interest because of the way the samples were defined and pre-post administration main effect was of no interest because of confounding.

Due to the manner in which the samples were defined, regression effect would be a major source of error for the SRF variables. Consequently, all SRF pretest

scores were adjusted for regression effect. (Adjusted pretest score=(Test Reliability) (obtained) + (1-reliability) (test $\bar{X}$).

Statistical significance was defined as the .05 level of probability.

Results

The descriptive results for each variable are given in Table 2. The analysis of variance results are summarized in Table 3. The results summarized in Table 3 are based on the adjusted pretest scores.

As reported, the interaction effect for three of the six SRF variables were statistically significant as was the self-concept interaction. To clarify the significant interaction effects the results are graphically presented in Figures 1 and 2.

Educational Significance of Results

The educational significance of the results include:

1) Students with select behavioral problems can be helped through a resource room, mainstreaming based program. Behavioral areas helped in the study were socialization, relation to authority and negative acting out.

2) Improvement in socialization should help the student by creating for that student a better learning environment thereby helping to maintain the student in school and providing school resources more time to help the student or to further the student's educational skills.

3) Improvement in relation to authority and negative acting out should have the same effect as above and, in addition, improvement in these two areas should have a direct effect on the student's relation with teachers. It would be anticipated that improved in-class behavior would contribute to improved teacher-student relationships and, hopefully, improved student performance.

Table 2
Descriptive Results Per Variable

Variable	Treatment Sample							Comparison Sample					
		Pretest		Adj.Pretest		Posttest			Pretest		Adj.Pretest		Posttest	
	N	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s	N	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s
SRF 1: Socialization	17	5.82	1.74	6.51	1.48	7.94	3.01	22	10.55	1.26	10.52	1.07	10.09	2.16
SRF 2: Anxiety	16	6.50	2.19	8.04	1.42	8.56	2.83	23	11.57	.66	11.33	.43	10.91	1.28
SRF 3: Relation To Authority	12	10.17	2.13	11.27	1.64	12.75	2.14	27	15.33	.92	15.25	.71	14.26	2.26
SRF 4: Activity Level	21	5.95	1.40	7.19	1.03	7.24	1.97	18	10.56	1.29	10.60	.96	9.67	2.59
SRF 5: Negative Acting Out	8	9.63	.52	10.28	.36	11.50	.75	31	11.94	.24	11.89	.17	10.87	2.09
SRF 6: Reaction To School	22	6.41	1.68	7.72	1.10	7.68	2.59	17	10.47	1.13	10.59	.80	9.53	2.35
Self Concept As A Learner	6	39.17	8.52	x	x	49.67	9.05	25 27	61.84 62.33	8.48 10.19	x x	x x	61.84 58.26	11.21 10.34

Table 3
Summary of Analysis Results

Variable	Between-Treatment F	Between-Treatment df	Within-Admin. F	Within-Admin. df	Within-Interaction F	Within-Interaction df
SRF 1: Socialization	33.40*	1,37	1.03	1,37	6.15*	1,37
SRF 2: Anxiety	50.91*	1,37	.01	1,37	1.91	1,37
SRF 3: Relation To Authority	37.56*	1,37	2.73	1,37	7.35*	1,37
SRF 4: Activity Level	44.81*	1,37	1.30	1,37	1.85	1,37
SRF 5: Negative Acting Out	1.79	1,37	3.13	1,37	8.12*	1,37
SRF 6: Reaction To School	26.91*	1,37	1.46	1,37	1.57	1,37
Self Concept As A Learner	10.73*	2,55	.34	1,55	4.72*	2,55

*$p \leq .05$

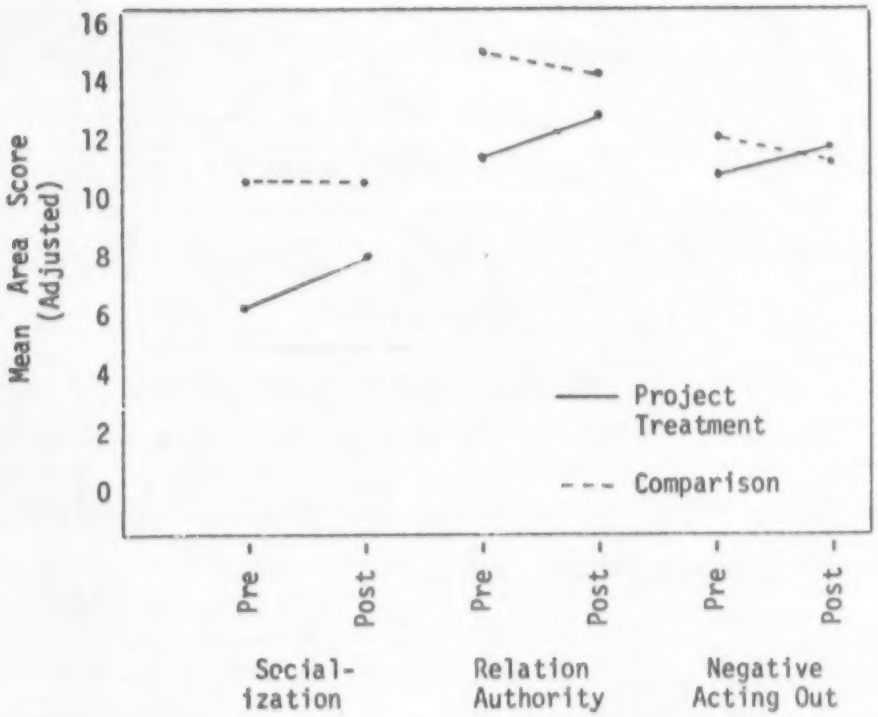

Figure 1
Pre-Post Mean Scores
For SRF Variables Having
Significant Interaction Effect

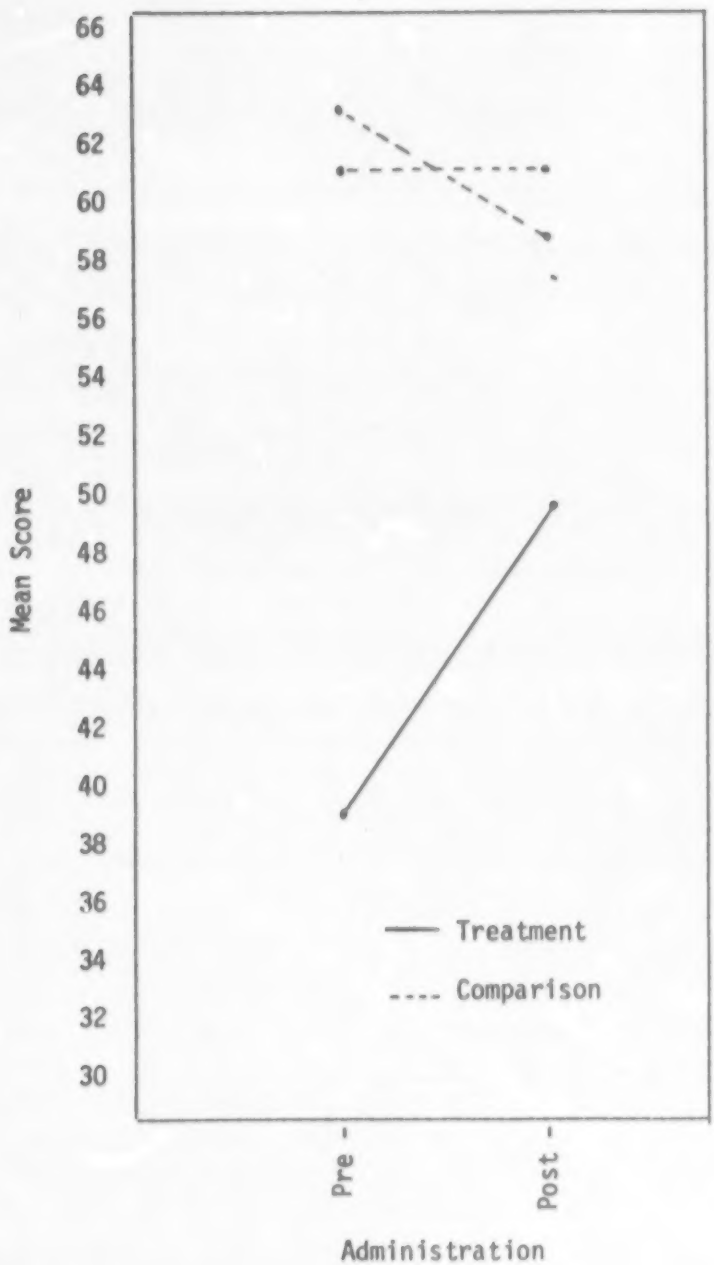

Figure 2
Self Concept As A Learner
Results

4) Project student self concept as a learner scores can be helped through an instructional program that includes prescriptive instruction.

5) Given the correlation between the criteria and educational achievement it would be expected that over time the students' achievement would improve.

6) Earlier evaluation results indicate a high level administrator acceptance of the project and presently involved local building administrators are most supportive of the project and express a need to continue the project. This endorsement is independent of the results presented in this validation report.

7) Prior evaluation results indicate that parents responding on a questionnaire are positive toward the project and feel the project is helping their students.

8) While the validation must focus on student outcomes and on behaviorally maladjusted students, the implications of the project markedly transcend these areas. Available evidence suggests that the project is an excellent inservice program for teachers dealing with school behavioral problems.

Conclusions

The conclusions were:

a) Project procedures improved project student socialization skills as reflected by teacher ratings on the Student Referral Form.

b) Project procedures improved project student relation to authority skills as reflected by teacher ratings on the Student Referral Form.

c) Project procedures improved project student behavior in the area of negative acting out as reflected by teacher ratings on the Student Referral Form.

d) Project procedures contributed to the improved student scores on the Self Concept As A Learner Scale while a comparison sample did not experience project procedures were showing a mean decrease in scores.